Date: Fri, 26 Aug 94 04:30:29 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #253
To: Ham-Homebrew

Ham-Homebrew Digest Fri, 26 Aug 94 Volume 94 : Issue 253

Today's Topics:

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

Date: Wed, 24 Aug 1994 20:55:34 GMT
From: news.Hawaii.Edu!kahuna!jeffrey@ames.arpa
Subject: 2M to FM bcast band converter
To: ham-homebrew@ucsd.edu

In his excellent reply to my idea ka7oei@uugate.wa7slg.ampr.ORG writes:
>
> If you look in a recent ARRL Radio Amateur's Handbook
>(you *do* have one of those, don't you, and why not??? I get a new
>one about once every 5-6 years... Enough has changed by then:-)

Ummm, I like to let a little more time go by than 5-6 years; I have
the 1950, 1972 and 1991 editions. I'll wait until about 2010 to
get another.

73 and thanks for your valuable ideas.

Jeff NH6IL

Date: Wed, 24 Aug 1994 20:46:28 GMT
From: news.Hawaii.Edu!kahuna!jeffrey@ames.arpa
Subject: 2 M to FM Broadcast Reply
To: ham-homebrew@ucsd.edu

In article <9407247777.AA777747053@mails.imed.com> mack@mails.imed.COM (Mack Ray)
writes:
>   Jeff:
>
>   This sounds like a good idea on the surface, but it has some very
>   serious technical problems. FM broadcast is wideband FM (VERY
>   wideband) whereas amateur is narrow band. The bandwidth of an amateur
>   signal is about 15KHz (give or take a little) with channels either
>   every 15KHz or 20KHz depending on where in the US you are. If things
>   have changed in the last 5 years they may all be 20KHz now. Broadcast
>   bandwidth is 200KHz. So you see if you use the broadcast radio you
>   will actually be listening to 10 amateur frequencies at once.

Hi Ray: I did mention this in my article when I said:

``...the selectivity will be awful (what's the bandwidth of an FM
station?)....''

but in an area with few active repeaters (such as here in Hawaii) it
might not be too bad. Hadn't thought about the low audio, though; I'll
just turn the volume up ;)

Remember, this project is just for fun - don't take it or me too
seriously.

Jeff NH6IL

Date: 24 Aug 1994 20:21:12 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: 4-1000 Homebrew Amp

To: ham-homebrew@ucsd.edu

In article <CuyKz8.E66@ncrcae.ColumbiaSC.NCR.COM>, Tom Skelton
<Tom.Skelton@ClemsonSC.NCR.COM> writes:

TOM, I AM PLANNING A PASSIVE GRID CIRCUIT with screen voltage. Are you
aware of this technique? I have had one reply by someone aware of this and
it sounds ok . The idea is a universal Amp for all HF as needed. I'm also
using a Powerstat on the Plate, screen and filament so I should be ready
for any eventuality. I already had most of the parts. How big a plate
capacitor do you want? I do run into them from time to time. I managed to
acquire vacuum caps for this one.

Thanks for the comments. Any info is most welcome. Gud Luk with your "Ne
plus ultra"

73 & gud DX Russ Ellsworth WA6CWV..Boise, Idaho

Date: 25 Aug 1994 15:33:14 GMT
From: zib-berlin.de!news.belwue.de!news.uni-stuttgart.de!deap1032@uunet.uu.net
Subject: 40m ANT
To: ham-homebrew@ucsd.edu

Hi Rob,

Two friends of mine (DL3SDN, DL6SDW) solved the very same problem
with a long wire hung out of the window and along the lamp posts
in the street. 80 or so meters long. It works fine for DX.
I once used a quarterwave out of the window, but thats to short.

73, Moritz DL5UH

Date: 24 Aug 1994 20:42:07 GMT
From: hplextra!news.dtc.hp.com!col.hp.com!fc.hp.com!amw@hplabs.hpl.hp.com
Subject: Flavor radio SW?
To: ham-homebrew@ucsd.edu

I'm looking for information on taking a cheap Radio Shack AM radio (The colored
ones they sell as "Flavoradio's") and adding a selector switch and a set
of coils to change the frequency range to allow SW reception.

There was an article on doing this in one of the electronics mags
(Radio Electronics, Popular Electronics, ...) two or three years ago but I
just saw it in passing and can't remember which magazine or when it was

printed (My best recollection is that it was Nov-Dec-Jan of '91).

If anyone remembers this or has some general comments on this type of conversion, let me know.

Andy Weilert
amw@fc.hp.com

Date: 25 Aug 1994 00:12:16 GMT
From: solaris.cc.vt.edu!usenet@uunet.uu.net
Subject: FM transmitter
To: ham-homebrew@ucsd.edu

I was looking for the schematics on how to build a FM transmitter, maybe even a transceiver later on down the road. I have the schematics for one that was e-mailed to be, but it never worked. I would like it to be simple if possible. Any help would be appreciated.
*
* Art

Date: 25 Aug 94 16:01:22 GMT
From: news-mail-gateway@ucsd.edu
Subject: Ham-Homebrew Digest V94 #252
To: ham-homebrew@ucsd.edu

ref Ham-Homebrew Digest V94 #252
article: 24 Aug 94 19:46:52 GMT
From: ihnp4.ucsd.edu!sdcc12!jeeves!daniels@network.ucsd.edu
Subject: ss delay relay ?

> I've got an Omnetics Inc. solid-state delay relay that I need
>the pin-out for. Part # MMS115A5Y60A, with four spade lugs numbered
> 1 - 4. The surplus shop I got it from says it's an adjustable
> delay, but I'm pretty sure it's a fixed 60-sec delay. Does
> anyone have any information on this part or know the
> address/phone # of Omnetics? Many thanks for any help mark
> daniels daniels@jeeves.ucsd.edu

a quick look on a CD ROM data base yields
Omnetics ph # 315-699-5262
PO box 2577
Syracuse, NY, 13220-2577

Tech data is terse and does not include pin out:
115 vac spst 1 amp rms steady 20 ma min

The NSN data indicates the company was in process of being sold at time the data was entered. CD-ROM data base is copy of Defense Logistic Supply Center Data, No spares procurment history. No other PN assigned to same NSN.

GOOD LUCK in applying it.

73, K5VMU

Dale_Croft@comsys.rockwell.com Integrated Logistic Support Mgr
My opionions may not be shared or endorsed by Rockwell, YMMV

Date: Thu, 25 Aug 1994 02:41:56 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!europa.eng.gtefsd.com!ulowell!simtel.coast.net!msdos-ann-request@network.ucsd.edu
Subject: handicnt.zip - Optoelectronic 3000A & M1 handicounter reviews
To: ham-homebrew@ucsd.edu

I have uploaded to the SimTel Software Repository (available by anonymous ftp from the primary mirror site OAK.Oakland.Edu and its mirrors):

SimTel/misc/hamradio/
handicnt.zip Optoelectronic 3000A & M1 handicounter reviews

handicnt.zip contains two text documents, reviewing Optoelectronic's 3000A and M1 handicounters, capable of time domain measurements on directly coupled and RF signals up to the gigahertz range. These have attained leading market position and are advertised in most Amateur Radio/electronic magazines. I have owned both of these meters and after running them them through the ringer, summarized my findings in these technically accurate reports, unbiased by advertisement dollars. Other users and possible owners will be interested in what they can - and can't - do.

FreeText. Uploaded by the author.

Brian Mork
bmork@opus-ovh.spk.wa.us
ka9snf@ka7fvv.#ewa.wa.usa
6006-B Eaker, Fairchild, WA 99011
V:509-244-3764 D:509-244-9260

Date: 25 Aug 1994 07:30:59 -0700

From: nntp.crl.com!crl2.crl.com!not-for-mail@decwrl.dec.com
Subject: Help designing Capacitor Impedance Match Network
To: ham-homebrew@ucsd.edu

David_Shalita.ES_AE@xerox.COM wrote:
:
: To: qrp-digest@think:com   Ham-Homebrew@UCSD.Edu
: 8-24-1994
:
: I need help calulating the capacitor values in this capacitor impedance
: matching network. See enclosed figure.
:
: 1. Given:
:   LC tank, L = 4.7 uh, Q =40, F operating = 10.7mhz, TOKO PN TK3149
:   Tank fed from NE-602 Mixer output pin 4, source Z = 1.5 K.
:   FL1 10.7 mhz Ceramic Filter, TOKO type CFSK TK2306

Since you are using a relatively low Q inductor, it will be advisable to
lump the equivilent parralel resistance of the coil with the source
resistance ov the NE602. The Rp of the inductor is approximately 12.6K.
The 12.6K should be added in parrallel with the 1.5K for a virtual source
impedance of 1340 ohms. You really want to match 1320 ohms to 330.
:
: 2. I calculated Ctotal to resonate tank at 10.7 mhz, = 47 pf's

Correct.
:
: 3. The capacitive divider tank must match 1.5K mixer output to the
:   Ceramic filter   FL1 which requires 330 ohm input termination.

...or 1340 to 330 as per the adjustment I mentioned earlier :)

:
: 4. I need help with design info method for converting 47pf
:   into 2 or 3 capacitors for the capacitive divider.

There are two simultaneous equations that you need to solve:

     (C2*C3)/(C2+C3) = 47*10^-12   so that you get 47 pF

     (C2/(C2+C3))^2 = Rout/Rin = 330/1340

In this case, the caps are almost equal since the impedance ratio is
very close to 4:1. Use C2=C3=100pF
:
: 5. Need a general solution to handle any practical impedance match.
:

For circuit Q's greater than 10, the procedure I outlined is general.

: 6. Could use a reference. I have looked unsuccessfully.

Solid State Radio Engineering, Herbert L. Krauss, John Wiley & Sons,
1980, ISBN 0-471-03018-X, pp 48-53

--

Don Miller   My opinions are my own!
dmiller@crl.com

Date: Thu, 25 Aug 1994 02:42:38 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!ulowell!simtel.coast.net!msdos-ann-request@network.ucsd.edu
Subject: mlhacker.zip - Zenith Minisport docs, hints, hacks & goodies
To: ham-homebrew@ucsd.edu

I have uploaded to the SimTel Software Repository (available by anonymous
ftp from the primary mirror site OAK.Oakland.Edu and its mirrors):

SimTel/msdos/packet/
mlhacker.zip   Zenith Minisport docs, hints, hacks & goodies

mlhacker.zip is a compendium of newsletters about the Zenith Minisport
laptop computer and its use as a packet radio host computer. Zenith
offers only minimal and expensive support for this popular but
discontinued 8086 compatible notebook computer. Newsletters contain
technical notes, construction projects, operating hints, resources,
architecture details and other related goodies. The Minisport Laptop
Hacker series is the result of owning and repairing Minisports and
donations from others on Internet and the Amateur Radio packet networks.

Special requirements: None

Changes: Compendium includes Minisport Laptop Hacker #1 - #22.

FreeText. Uploaded by the author.

Brian Mork
bmork@opus-ovh.spk.wa.us
ka9snf@ka7fvv.#ewa.wa.usa
6006-B Eaker, Fairchild, WA 99011
V:509-244-3764 D:509-244-9260

Date: 25 Aug 1994 06:12:40 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!usc!nic-nac.CSU.net!
news.Cerritos.edu!news.Arizona.EDU!seds!enigma@network.ucsd.edu
Subject: Question from a newbie
To: ham-homebrew@ucsd.edu

Hi there:
    Does anybody know where I can get the source code for Baycom or anything like it?

Thanks in advance!
Andrew Tubbiolo
Enigma@SEDS.lpl.arizona.edu
KC7BHW
Phys 415a

Date: Wed, 24 Aug 94 13:57:00 PDT
From: ihnp4.ucsd.edu!news.cerf.net!mvb.saic.com!news.alpha.net!MathWorks.Com!
europa.eng.gtefsd.com!howland.reston.ans.net!swrinde!sdd.hp.com!svc.portal.com!
portal!cup.portal.com!dbell@network
Subject: regenerative sets and selectivity
To: ham-homebrew@ucsd.edu

>>The "super-regenerative" receiver (detector) should also be considered in
>>the discussion. I never understood how they worked,...

>These things have always puzzled me too.
>As my current understanding goes, an oscillator tuned to the
>approximate frequency of reception is periodically stopped and then
>allowed to restart at a rate of, say, 40KHz. If some received
>energy at the right frequency is coupled into the resonant
>circuit, the restart tends to be quicker, with a noticable effect
>on the current drawn by the oscillator.

>The current drawn by the oscillator contains the output signal.

>Is this how it works?

>Best regards,
>Jeroen Belleman

Not to my recollection... I missed earlier portions of this
thread, but as I understood it, the regenerative circuit was
an attempt to boost gain of a receiver stage by adding positive

feedback, up to *almost* the point of oscillation. If this
point was exceeded, the receiver would become a transmitter,
and all received signal would be swamped by the oscillator's
current. The super-regen was a design that eliminated the
critical hand-tuning of the regen (which had been by tuning
the feedback control for each received signal) by allowing
the stage to go into oscillation, which (mumble, mumble)
increased grid current, which built up a DC voltage by
charging a cap across a multi-meg grid-leak resistor, which
reduced the gain, driving it out of oscillation... The effect
was similar to a sawtooth relaxation oscillator controlling
the gain (via grid bias) of the amplifier stage. The operating
points were chosen so that the stage 'hovered' about the critical
gain level, getting a voltage gain of thousands(?) from a single
amplifier stage.

Or, something to that effect... :{)

Dave
dbell@cup.portal.com

Date: 24 Aug 94 14:51:54 EDT
From: psinntp!main03!drager.com!landisj@uunet.uu.net
Subject: Where to buy kits?
To: ham-homebrew@ucsd.edu

In article <337t36$7t7@usenet.INS.CWRU.Edu>, sct@po.cwru.edu (Stephen C. Trier)
writes:
> In article <znr777437775k@crl>,
> Dennis Rice <drice@crl.com> wrote:
>> What are the best sources for kits for amplifiers, receivers,
>> transmitters, antennas, etc.
[lots of good info from Stephen trimmed to save b/w]

For antennas, I must also recommend Bill Orr's books: The Beam Antenna
Handbook, which has a lot of good design and construction information on Yagis,
LPDA's and quads. I also believe that he has published a more generic Antenna
Handbook, which is probably worth checking out too.
Joe - AA3GN
--
Joe Landis - System & Network Mgr. - North American Drager Co. Telford, PA
landisj@drager.com | uupsi5!main03!landisj | AA3GN@WA3TSW.#EPA.PA.USA
Opinions are mine only, and do not reflect those of my employer.
...Munging Until No Good...

Date: 24 Aug 1994 22:37:17 GMT
From: hookup!yeshua.marcam.com!MathWorks.Com!europa.eng.gtefsd.com!
howland.reston.ans.net!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!
col.hp.com!fc.hp.com!wayne@ames.arpa
To: ham-homebrew@ucsd.edu

References <776791198snz@arkas.demon.co.uk>, <fred-
mckenzie-1708941430140001@128.159.123.111>,
<1994Aug22.134836.8674@dxcern.cern.ch>.co
Subject : Re: regenerative sets and selectivity

> As my current understanding goes, an oscillator tuned to the
> approximate frequency of reception is periodically stopped and then
> allowed to restart at a rate of, say, 40KHz. If some received
> energy at the right frequency is coupled into the resonant
> circuit, the restart tends to be quicker, with a noticable effect
> on the current drawn by the oscillator.

> The current drawn by the oscillator contains the output signal.

> Is this how it works?

This is what I remember. These were used mostly on VHF? Maybe ancient
versions of the ARRL Handbook have good explanations of what is going
on.

Wayne

Date: Thu, 25 Aug 1994 16:01:07 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
sol.ctr.columbia.edu!news.ess.harris.com!adm01%rfc.comm.harris.com!
gdian22@network.ucsd.edu
To: ham-homebrew@ucsd.edu

References <777331508snz@lfheller.demon.co.uk>,
<33a7c1$ndn@meaddata.meaddata.com>, <CuzuIy.DLL@news.ess.harris.com>om
Subject : Re: WANTED: Source for Signetics NE604 or SA604 IF/FM detector chip

: : |> > I am trying to find a source for the Signetics NE604 or the equivalent

: Try 624 Kits, the last price list I had from them had it listed as
: $1.65 each, or 10 for $14.50. phone 803-573-6677.

: Another source is Dan's Small Parts and Kits.

: I've ordered parts from both and they are reliable.
: I don't have their addresses handy, check the back of QST or 73 magazines.

: - Gary N2JGU

MY MISTAKE... I was reading ne604 and thinking ne602. Sorry about
any inconvenience... again, my error.
- Gary N2JGU

End of Ham-Homebrew Digest V94 #253
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